

## LESSONS FROM GRECO-MULTILATERALISM FOR CREDITORS

*Georgakopoulos*

*Georgakopoulos is a Harold R. Woodard Professor of Law, Indiana University, Robert H. McKinney School of Law, Indianapolis. He wishes to thank André Borraine, Guido Calabresi, Juanitta Calitz, Evgenia Dakoronia, Jennifer Drobac, Panagiotis Glavinis, Mitu Gulati, Simon Johnson, Ken Klee, James Kwak, Emily Morris, Evangelos Perakis, Richard Posner, Carmen Reinhart, Hans-Berndt Schaeffer, Dimitrios Triantafyllou, Stephen Utz, Jay Weiser and all the participants and organizers of the Financing Sovereignty conference of the Connecticut Journal of International Law on April 27, 2012, for their helpful comments, as well as acknowledge the exceptional librarian assistance of Susan deMaine and Miriam Murphy.*

## TABLE OF CONTENTS

INTRODUCTION	23
I. SOVEREIGNS V. CREDITORS FROM 550 B.C. TO 1903	23
A. Circa 560 B.C. Perillos Burns	24
B. Circa 1300 A.D. Templars Burn	24
C. Circa 1882-1903: Invasions of Egypt and Venezuela	25
II. 21 <sup>ST</sup> CENTURY GRECO-MULTILATERALISM	26
A. Drachma, Euro, Olympics, Insolvency	26
B. The Destructive Political and Media Establishment	28
C. No Inflation, No Eurozone Departure	31
III. COLLECTIVE ACTION PROBLEMS AND SOLUTIONS	32
A. The Sovereign's Inability to Commit to Growth	32
B. The Minority Creditor's Incentive to Hold Out	34
IV. SOVEREIGN INSOLVENCY LAW DESIDERATA	36
A. Post-Insolvency Creditor Priority	36
B. Voting by Class	37
C. Conditioning of Restructuring	38
CONCLUSION	39

## INTRODUCTION

Sovereign insolvencies cause enormous losses to lenders, huge disruptions in the debtor's population and its welfare, and extraordinary mobilization of international organizations, such as the International Monetary Fund ("IMF") and the European Central Bank ("ECB"), which were designed to safeguard the financial system. Greece's insolvency displays all these phenomena, but it also demonstrates the improvement that would be available from a sovereign insolvency regime following three simple principles: (1) post-insolvency creditors should have priority; (2) creditors should vote by classes; and (3) restructuring should be conditional on the debtor's compliance with reforms.

This essay underscores the inability of creditors and multilateral organizations like the IMF and the ECB to obtain credible commitments from debtors for continued reforms and supervision. The contribution of this essay lies in identifying this problem and proposing its resolution through a restructuring that is conditional on continued debtor compliance.

Part II offers some historical anecdotes about the weakness of sovereign creditors. Part III discusses a chronology of the Greek default, the negative effect of Greek politics, and the inapplicability of inflation or departure from the Eurozone as possible solutions. Part IV explains two collective action problems and their resolutions. First, the sovereign debtor cannot commit to change its political status quo and adopt growth policies. As a result, its creditors cannot consent to restructuring and advance new loans. Multilateral institutions resolved this by imposing reforms on Greece and by enticing its creditors to agree to a restructuring through a two-step transaction with injection of new value for the creditors' benefit and by accumulating bonds to be partially forgiven. Second, minority creditors have the incentive to hold out for full repayment. Greece resolved this problem by enacting collective action legislation and by triggering the collective action clauses of its foreign-law loans. Part V explains how the cost of restructuring would be much lower under the proposed regime. Part VI concludes by estimating that lacking this regime has cost multilateral institutions (and ultimately taxpayers worldwide) €39-€64 billion, or about \$51-\$85 billion.

### I. SOVEREIGNS V. CREDITORS FROM 550 BC TO 1903

The experience of everyday life teaches us that creditors have the power to compel collection of their claims. History, however, shows that creditors are essentially powerless when brought up against sovereigns.

Our impression from daily life is not necessarily what one would have without law. Rather, the power of creditors to activate the state's powers to compel collection is a result of a legal and institutional structure designed to facilitate credit. Creditors would not have power if the law did not give them the ability to exert the state's powers to seize debtors' assets.

### *A. Circa 560 BC: Perillos Burns*

The historical inventor of capital punishment by fire for the Western World was Phalaris, the despot of Agrigentum, a Greek colony in southern Sicily from about 570 BC to 554 BC. The victim was enclosed inside the sculpture of a bull, created by Perillos (of Athens, no less). When Perillos pressed his claim to be paid for the construction of the bull, Phalaris made Perillos its victim.<sup>1</sup> This early conflict between sovereign and creditor would not be the last to end with the creditor's burning. Much better organized creditors were also to burn.

### *B. Circa 1300 AD: Templars Burn*

In about 1300 AD, King Philip IV of France found himself deeply indebted to the Knights Templar, a superbly organized multinational military religious order. The result of the conflict was that the Templars burned at the stake.<sup>2</sup>

The Knights Templar was a monastic association formed under the authority of the Catholic Church to facilitate the Crusades. The full Latin name of the association, *Pauperes Commilitones Christi Templicque Solomonici*, loosely translates as Impoverished Allie[d Knight]s of Christ and the Temple of Solomon. The Templar order was initially housed in the newly occupied Solomon's Temple in Jerusalem during the first Crusade around 1119, by order of King Baldwin II of Jerusalem. The church officially endorsed the Templar order in 1129, and a Papal order of 1139 exempted Templars from local laws. This exemption increased the mobility of the Templars dramatically, since they no longer needed to obtain licenses or to pay duties to cross borders.

The economic power of the Templars grew exponentially. Not only did they become a favored charity, but they also started offering a wealth management service to nobles who desired to join the Crusades. The Templars also created the precursor to the letter of credit or bank check. Pilgrims would give assets to the Templars in their homeland and receive a letter stating their balance and authorizing them to receive that value from the Templars in the Holy Lands.

The economic success of the Templars became enormous. In addition to vast land holdings, they had a private navy, manufacturing, trade, and at one point owned the entire island of Cyprus.<sup>3</sup> However, as the crusaders began to cede power to the rising Turks, the Templars' fates came into question.

Despite the formidable power of the Templars, their fate as sovereign lenders was disastrous. The conflict that ensued came to spell the end of the Templars.

---

1. Pindar, *PYTHIAN 1* (Diane A. Svarlien ed., 1990), available at <http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.01.0162:book=P>.

2. See generally MALCOLM BARBER, *THE NEW KNIGHTHOOD: A HISTORY OF THE ORDER OF THE TEMPLE* (1994); SEAN MARTIN, *THE KNIGHTS TEMPLAR: THE HISTORY & MYTHS OF THE LEGENDARY MILITARY ORDER* (2004); JOCHEN BURGTORF, *THE CENTRAL CONVENT OF HOSPITALLERS AND TEMPLARS: HISTORY, ORGANISATION, AND PERSONNEL 1099, 1120-1310* (2008).

3. MALCOLM BARBER, *THE NEW KNIGHTHOOD: A HISTORY OF THE ORDER OF THE TEMPLE* (1994); EDWARD BURMAN, *THE TEMPLARS: KNIGHTS OF GOD*, (1990); SEAN MARTIN, *THE KNIGHTS TEMPLAR: THE HISTORY AND MYTHS OF THE LEGENDARY MILITARY ORDER* (2005); KAREN RALLS, *KNIGHTS TEMPLAR ENCYCLOPEDIA* 28 (Gina Talicid ed., 2007).

King Philip IV the Fair of France found his state insolvent and in debt to the Templars. While not having the authority to tax the order's enormous holdings, the king was able to mobilize the power of the state to arrest hundreds of Templars on Friday the 13<sup>th</sup> of October 1307. The Templars were tortured into false confessions and burned at the stake. Figure 1 is a medieval illustrated manuscript that offers the image of King Philipp overseeing the burning of the last Templar Grand Master, Jacques de Molay.<sup>4</sup>



**Figure 1:** Illuminated medieval manuscript image of King Philipp IV the Fair (Philippe IV le Bel) of France overseeing the burning of Templars, including the last Grand Master, Jacques de Molay.

The contest between a sovereign and a creditor has never been a close one. Even a creditor as powerful as the Templars ends burned.

### *C. Circa 1882-1903: Invasion of Egypt and Venezuela Blockade*

History offers few examples of the opposite phenomenon, of a sovereign applying the state's power in favor of allied creditors. A famous corollary is the placement of French and English controllers on the cabinet of Egypt on 1878 and the subsequent English invasion of Egypt on 1882 (in reaction to Egyptian intransigence).<sup>5</sup> The theory that the British invasion was motivated by debt collection rather than political expansionism is weak.

---

4. LES CAPÉTIENS, [http://www.histoire-fr.com/capetiens\\_philippe4\\_4.htm](http://www.histoire-fr.com/capetiens_philippe4_4.htm) (last visited Oct. 24, 2012); *see also* THE CLOISTERS... TEMPLE OF THE SUN, <http://www.premiumorange.com/tapisseries-licornes/CHASSE/011-%20Temple%20of%20the%20sun.htm> (last visited Oct. 24, 2012).

5. *See generally*, DEREK HOPWOOD, EGYPT: POLITICS AND SOCIETY 1945–1990 (1st ed.1982).

An example that is alleged to be close to an enforcement action is the two-month blockade of Venezuela from December 1902 to February 13, 1903, by the English, German, and Italian fleets. While some motivation for the war was support of creditors, a very credible view is that the war, like England's invasion of Egypt, was a response to Venezuelan intransigence.<sup>6</sup> While Venezuela had been insolvent for a long time, the conflict did not start until Venezuela took a British ship, *The Queen*, in June 1902. Furthermore, the conflict was an opportunity for the European powers to expand influence into South America. However, the revelation of financial motivations defeated the justification of the war. As soon as the monetary motivations for the war were revealed, popular support for the war in England evaporated. The popular response is exemplified in the poem "The Rowers" by Rudyard Kipling published on December 22, 1902 in the Times, which derides a war to help "press for a debt!"<sup>7</sup> Soon thereafter, many states entered into a treaty not to pursue debt collection by force.<sup>8</sup>

In sum, creditors have never fared well against the traditional view of sovereignty. The idea that a sovereign would risk a domestic army and political discontent to collect private debts has scant support. Rather than being used as a sword for collection, sovereignty was instead used to avoid liability, as the examples of Perillos and the Templars show. History does not give creditors much hope. Nevertheless, lending to sovereigns continues. Greece stars in the current act.

## II. 21<sup>ST</sup> CENTURY GRECO-MULTILATERALISM

The contemporary Greek insolvency drama has various interesting perspectives. After a brief chronology, this part discusses how Greek politicians and the media have failed to promote the long-term interests of Greece and how inflation or abandoning the euro would not have helped Greece. The subsequent part then explores how Greece's restructuring reveals the limitations of restructurings and how to overcome them.

### A. *Drachma, Euro, Olympics, Insolvency*

Until 2000, Greece had its own currency, the drachma. Greece ran moderately high inflation, about 10% to 18%. In 2001, Greece joined the euro and started enjoying cheap borrowing and fast economic growth. In the summer of 2004, Greece hosted a very successful but costly Olympiad. Shortly after, in 2008, Greece entered a recession that still binds it.

---

6. See MICHAEL TOMZ, REPUTATION AND INTERNATIONAL COOPERATION: SOVEREIGN DEBT ACROSS THREE CENTURIES 114-57 (2007) (empirically showing that no practice existed to enforce debts by gunboats).

7. Ian L.D. Forbes, *The German Participation in the Allied Coercion of Venezuela 1902-1903*, 24 AUSTRAL. J. POL. & HIST. 317-31 (Dec. 1978). See also NANCY MITCHELL, THE DANGER OF DREAMS: GERMAN AND AMERICAN IMPERIALISM IN LATIN AMERICA 96, 252 n.122 (1999).

8. 1776-1949 1 Bevans 537 (Hague Convention Respecting the Limitation of the Employment of Force for the Recovery of Contract Debts) available at [http://avalon.law.yale.edu/20th\\_century/hague072.asp](http://avalon.law.yale.edu/20th_century/hague072.asp).

In February of 2010, the Greek government announced a revision of its expected government deficit. Whereas the EU recommendation was for a deficit under 3% of gross domestic product ("GDP"), Greece expected a deficit of 5% that it subsequently revised to 13%. The credit rating of Greek debt deteriorated to junk bond status, with the result that Greece could no longer borrow from the open markets.

In April of 2010, Greece asked the International Monetary Fund ("IMF") for a €45 billion loan. The IMF, joined by the European Central Bank ("ECB") and the European Union ("EU"), approved a short term loan to Greece of €110 billion, conditional on the adoption of measures of austerity, cost reduction, and continued oversight by the three institutions, dubbed the "Troika." The parliamentary passage of the austerity measures triggered strikes and protests.<sup>9</sup>

In February of 2012, the Troika, with the need to refinance the previous loan looming, joined with Greece and private sector lenders to agree on a restructuring plan. The Troika would lend €130 billion to Greece conditional on "private sector involvement" ("PSI") in the losses from Greece's insolvency. Creditors holding Greek obligations would receive obligations of a smaller face amount and longer duration, as well as short-term obligations of the ECB. Thus, the Troika also injected value for the benefit of the creditors.<sup>10</sup>

Greece passed a law that its existing obligations (that were subject to Greek law) can be amended with 2/3rds (by amount) approval of their holders and asked its lenders to approve the exchange. Greece had also borrowed under bonds subject to English law. The covenants of the English law bonds allowed exchange if 2/3rds to 3/4ths of the bondholders (by amount) voted in favor. In March 2012, Greece obtained the necessary majorities to exchange all Greek law bonds and sixteen English law bonds.<sup>11</sup> However, 20 English law bonds have failed to receive the required majorities.<sup>12</sup>

One somewhat overseen aspect of the restructuring is the ECB's swap of Greek bonds with a close maturity with longer-term bonds not subject to collective action clauses. The ECB has said that it will eventually return any profits that the

---

9. For an extensive discussion of Greece's slide into default, see MATTHEW LYNN, BUST: GREECE, THE EURO, AND THE SOVEREIGN DEBT CRISIS (2011).

10. Alex Chambers & Christopher Spink, *Greece Bond Restructuring Set for Friday*, REUTERS (Feb. 23, 2012), <http://www.reuters.com/article/2012/02/23/greece-restructuring-idUSL2E8DN7TK20120223> ("Investors will receive two-year bonds issued by the European Financial Stability Facility, which will account for 15% of the old par value.").

11. See, e.g., Landon Thomas Jr., *Given Greek Deal, Investors May Reconsider Sovereign Debt*, N.Y. TIMES (Feb. 24, 2012), <http://www.nytimes.com/2012/02/25/business/global/as-greek-restructuring-looms-bondholders-think-twice-about-other-sovereign-debt.html?pagewanted=all> ("[I]mpose a loss of as much as 75 percent on all investors").

12. See Stelios Bouras & Alkman Granitsas, *Greece Faces Bond-Swap Holdouts*, WALL ST. J. (Apr. 2, 2012), available at <http://online.wsj.com/article/SB10001424052702304023504577319250078129544.html> (stating that on May 15, 2012, Greece, caught between elections and without a stable government, paid one of the holdout bonds in full); see also *US Vulture Fund Profits from Bond Payout*, EKATHIMERINI (May 16, 2012), [http://www.ekathimerini.com/4dcgi/\\_w\\_articles\\_wsire2\\_1\\_16/05/2012\\_442339](http://www.ekathimerini.com/4dcgi/_w_articles_wsire2_1_16/05/2012_442339) (stating that a sovereign insolvency regime should preclude such a payment to a holdout, despite its relatively small amount.).

ECB would make from bonds acquired below par to Greece.<sup>13</sup> In other words, the ECB accumulated Greek bonds at prices well below par before the second step of the restructuring and states that it will not make a profit on those bonds. Yet, while buying those bonds, the ECB was fully aware of Greece's insolvency and had no reason to be buying virtually worthless Greek debt. Further reflection reveals a fascinating phenomenon. The ECB's willingness to forego its profit gives the ECB a sizable and credible threat against Greece. If Greece does not comply with the requirements of the ECB, then the ECB has the latitude to change its mind and insist on full repayment of its bonds. Essentially, the ECB can bring Greece back to insolvency at its discretion. Through this bond accumulation, the ECB is ameliorating one of the fundamental problems of sovereign insolvency, the inability to induce the debtor to comply with the demands of the international community after the completion of restructuring.<sup>14</sup>

### *B. The Destructive Political and Media Establishment*

Greece's own political and media establishments, whatever responsibility they may hold for the crisis, bear very significant responsibility for aggravating it. Moreover, their stances are in conflict with Greece's own long-term interests.

Although Greece may not have the cronyism and patronage problems of some poorer developing countries, it is a laggard when placed in the European context. Although world rankings for political patronage and cronyism are nonexistent, one can analogize from attempts to quantify fraud and corruption perceptions. The European Union's Flash Eurobarometer survey about fraud in state budgets placed Greece at the lowest position in the European Union in 2008.<sup>15</sup> In an amalgamation of corruption surveys, Transparency International ranked Greece 80<sup>th</sup> in the world in 2011, tied with Peru, Morocco, El Salvador, Colombia, and Thailand with a Corruption Perceptions Index of 3.4. That makes Greece the laggard of the Eurozone and penultimate in the European Union. The next worst showing of the Eurozone is Italy, which scores 3.9 tying for 69<sup>th</sup> place in the World, then Slovakia

---

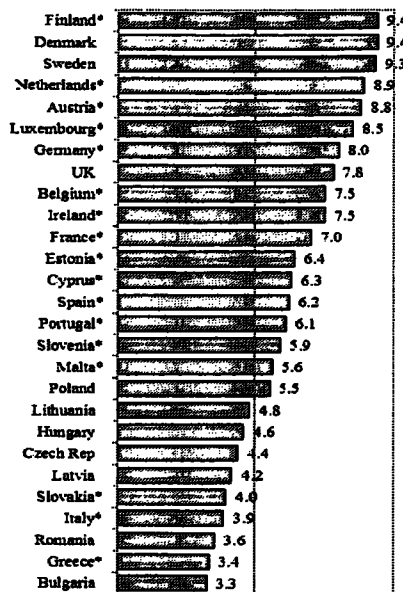
13. See, e.g., Gernot Heller, *ECB Ready to Forego Greece Bond Profit*, REUTERS (Feb. 15, 2012), <http://www.reuters.com/article/2012/02/15/us-eurozone-greece-asmussen-idUSTRE81E0FU20120215>.

14. Granted, the EU contains legal mechanisms that condition payments to member states on their compliance with its fiscal mandates. However, the ECB's bond accumulation and proposed forgiveness adds the threat of additional liability to the threat of the withholding of funds, making it more potent. For an example of legal conditioning of support, see Commission Regulation 1084/06, 2006 O.J. establishing a Cohesion Fund and replacing Regulation 1164/94, art. 4, 2006 O.J. (L 210) (EC) ("Assistance ... shall be conditional on the following rules: (a) if the Council has decided in accordance with Article 104(6) of the Treaty that excessive government deficit exists in a beneficiary Member State, and (b) has established in accordance with Article 104(8) of the Treaty that the Member State concerned has not taken effective action in response to a Council recommendation made under Article 104(7) of the Treaty, it may decide to suspend either the totality or part of the commitments from the Fund for the Member State concerned with effect from 1 January of the year following the decision to suspend.").

15. See THE GALLUP ORG., CITIZENS' PERCEPTIONS OF FRAUD AND THE FIGHT AGAINST FRAUD IN THE EU27 7 (Oct. 2008), available at [http://ec.europa.eu/public\\_opinion/flash/fl\\_236\\_en.pdf](http://ec.europa.eu/public_opinion/flash/fl_236_en.pdf) (stating that 91% of the Greeks surveyed considered that the extent to which the state budget was being defrauded was "rather frequent.").



with 4.0 tying for 66<sup>th</sup>, while the rest of the Eurozone countries have indices of 5.5 or greater. Figure 2 ranks the countries of the European Union by their 2011 Corruption Perception Index, marking with asterisks the members of the Eurozone.<sup>16</sup>



**Figure 2:** The members of the European Union ranked by 2011 Corruption Perception Index; asterisks mark members of the Eurozone.

Regardless of the inability to quantify and compare the political patronage and cronyism of Greece to other members of the Eurozone, commentators consider it an important source of the problem.<sup>17</sup> Whereas well-run states can have large public sectors that operate efficiently, Greece's public sector appears to have been staffed by patronage and to operate grossly inefficiently.<sup>18</sup> The New York Times reports of a bureaucracy of extreme waste, where one out of every five employees works for the government and government jobs are rewards for political votes.<sup>19</sup>

One of the EU's key demands for reform is Greece's reduction of the number of its public employees. The patronage system is so deeply embedded in Greece,

16. See *Corruption Perceptions Index 2011*, TRANSPARENCY INTERNATIONAL, <http://cpi.transparency.org/cpi2011/results/> (last visited Nov. 24, 2012).

17. See, e.g., Haris Mylonas, *Is Greece a Failing Developed State? Causes and Socio-economic Consequences of the Financial Crisis*, THE KONSTANTINOS KARAMANLIS INSTITUTE FOR DEMOCRACY YEARBOOK 2011: THE GLOBAL ECONOMIC CRISIS AND THE CASE OF GREECE (2011), available at [http://www.wcfia.harvard.edu/sites/default/files/Mylonas\\_fulltext.pdf](http://www.wcfia.harvard.edu/sites/default/files/Mylonas_fulltext.pdf).

18. See generally TAKIS S. PAPPAS, MAKING PARTY DEMOCRACY IN GREECE 69-74 (1999) (discussing the intense political patronage of the post-WWII period and its resurfacing after democracy returned in 1974).

19. Suzanne Daley, *Bureaucracy in Greece Defies Efforts to Cut It*, N.Y. TIMES, Oct. 18, 2011, at A6.

however, that this demand conflicts with a constitutional protection of the tenure of public employees.<sup>20</sup>

The constitutional protection of public employee tenure and other constitutional law tensions complicated the financing agreements with the European Union. The simple parliamentary majority (of 151 out of 300 seats) that would have been sufficient for the ratification of the agreement by the parliament to have the force of law was not sufficient. Rather, the agreement had to obtain the three fifths (180 vote) majority required for constitutional amendments (although full compliance would also require an intervening popular election).<sup>21</sup> The governing party did not have the necessary votes. From the perspective of the governing party, the necessity of a political coalition was salutary. Rather than the governing party alone bearing the enormous political cost of the reforms, all the parties of the coalition would bear them.

One might think that the dire financial straits and the need for reform would produce a coalition government, but that was not the case. Despite intense pressure from allied European parties, no party would join a coalition government. A coalition emerged only after the Prime Minister resorted to a surprise call for a national referendum, which rocked world financial markets.<sup>22</sup> The coalition government has since undertaken an obligation to reduce the number of public employees by 150,000.<sup>23</sup>

While the European Union continually insists on Greece's reduction of its public employees and bureaucracy, Greece remains committed to the tradition of the hydrocephalic state, with devastating results. Instead of trimming the employee rolls, the state first increased taxation, causing an economic recession and aggravating the problem. Then, the state tried to reduce its expenditures by cutting salaries and pensions. Massive demonstrations followed, leading to fires and

---

20. SYNTAGMA [SYN.] [Constitution] Art. 103 para. 4 (GREECE) ("Public employees ... enjoy tenure while their positions exist.").

21.

2. The necessity for a constitutional amendment is determined upon motion of at least fifty representatives with a three fifths majority of the entire number of representatives in two votes that are at least one month apart. This act specifies the provisions subject to amendment. 3. After the decision to amend the constitution, the next congress ... decides with the majority of the entire number of representatives about the provisions subject to amendment. 4. If the amendment proposal received the majority of the entire number of representatives but not the three fifths thereof per paragraph 2, then the next congress ... decides about the provisions subject to amendment with three fifths majority of the entire number of representatives ... 6. A Constitutional amendment is not allowed before the passage of five years from the prior amendment.

SYNTAGMA [SYN.] [Constitution] Art. 110 (GREECE).

22. Rachel Donadio, *Greek Leader Survives Vote, Bolstering Deal on Europe Debt*, N.Y. TIMES (Nov. 4, 2011), <http://www.nytimes.com/2011/11/05/world/europe/greek-vote-european-debt.html>; Steven Erlanger and Rachel Donadio, *Greek Premier Pledges Vote in December on Debt Deal*, N. Y. TIMES (Nov. 2, 2011), <http://www.nytimes.com/2011/11/03/world/europe/greek-cabinet-backs-call-for-referendum-on-debt-crisis.html>.

23. See, e.g., Niki Kitsantonis and David Jolly, *Greece to Eliminate 15,000 Government Jobs*, N.Y. TIMES (Feb. 6, 2012), [http://www.nytimes.com/2012/02/07/business/global/data-show-greeces-debt-ratio-growing-as-economy-shrinks.html?\\_r=1](http://www.nytimes.com/2012/02/07/business/global/data-show-greeces-debt-ratio-growing-as-economy-shrinks.html?_r=1), ("[T]he Greek government has promised to cut 150,000 jobs by 2015 from the public sector, which employs an estimated 750,000 people.").

deaths.<sup>24</sup> Large layoffs have still not occurred. The reduction of public employment has occurred mainly through voluntary programs, which tend to lead to the loss of honest and skilled employees, leaving behind an even more ineffective state.

Perhaps because of Greece's inability to reform its public sector, the course that the European Union has steered for Greece is one of internal deflation. Greece has been forced to cut the minimum wage, all salaries are expected to fall, and rents in all leases have been subject to renegotiation. The general idea is to decrease the cost of inputs for the Greek industry to regain competitiveness, essentially as it would through mild inflation. (Inflation would leave nominal costs unchanged but would reduce their real value and, thus, reduce the cost of Greek products abroad.) Although deflation sounds appealing, it has led to enormous civil unrest.

The number and the magnitude of errors committed by the political establishment seem astounding, yet remain unacknowledged. The media and the political parties blame Europe for Greece's ills. Yet, no Greek politician or journalist recognizes the need to reduce the government.

### *C. No Inflation, No Eurozone Departure*

Some have suggested that Greece abandon the euro and induce inflation as possible solutions to its predicament.<sup>25</sup> Neither the ability to print its own currency, thus inducing inflation, nor the ability to abandon the euro would help Greece.

The premise of the idea that printing currency is beneficial lies in the assumption that the bulk of a country's obligations are denominated in that currency. Credit markets give that option only to sovereign borrowers with extraordinary track records of fiscal management, such as the United States, the United Kingdom, Switzerland, and Japan. Most other sovereign borrowers receive their loans in currencies that they do not have the authority to print. Greece borrowed in euros that only the European Central Bank was authorized to print. Even if Greece were not part of the Eurozone, it would have to borrow in a foreign currency.

Domestic inflation would impede Greece's ability to convert its domestic currency into the foreign currency necessary to satisfy creditors. Leaving the euro and inducing inflation would not help Greece avoid insolvency.

Even if inflation was to magically solve Greece's payroll and pension obligations, it would still not be desirable. First, the domestic obligation to employees and retirees is a small fraction of Greece's obligations. Even if Greece could erase them, it would still be insolvent. Second, when a state tries to print its

---

24. See, e.g., Niki Kitsantonis and Rachel Donadio, *Greek Parliament Passes Austerity Plan After Riots Rage*, N.Y. TIMES (Feb. 12, 2012), <http://www.nytimes.com/2012/02/13/world/europe/greeks-pessimistic-in-anti-austerity-protests.html?pagewanted=all>.

25. See, e.g., Stergios Skaperdas, *How to Leave the Euro*, N.Y. TIMES (Nov. 9, 2011), <http://www.nytimes.com/2011/11/10/opinion/how-greece-could-leave-the-euro.html>. See also Simon Johnson et al., *Economist Q. & A. on Europe's Debt Accord*, N.Y. TIMES (July 22, 2011), <http://economix.blogs.nytimes.com/2011/07/22/economist-q-a-on-europes-debt-accord/> (comment of Laura D'Andrea Tyson) ("If Greece were not part of a common currency area, it would almost certainly follow the successful adjustment path of other developing economies from a deep financial crisis — official assistance from the I.M.F. or another source of public funds; austerity; debt restructuring; and a massive nominal and real depreciation of its currency to boost its competitiveness and growth. But as long as Greece remains part of the euro zone, this option is not available.").

way out of default, the result is hyperinflation, not mild inflation. In historic examples of hyperinflation, prices have doubled every few days.<sup>26</sup> Third, hyperinflation harms all savers, undermines the incentive to save, and distorts savings away from lending and banks and into inflation-proof assets, such as real estate. Hyperinflation produces a general distortion in economic activity. Hyperinflation rewards, for example, marking up merchandise rather than improving business operations. Hyperinflation would be devastatingly worse for all Greeks than the pay cuts that public employees and retirees have suffered.

### III. COLLECTIVE ACTION PROBLEMS AND SOLUTIONS

By February 2012, Greece's predicament was one of inescapable insolvency. Neither reducing the state's payrolls, nor inducing deflation, nor increasing tax revenues could make Greece solvent. Greece could not make the payments that it contractually had promised on its debt.

Greece's inability to service its debt could unfold in various ways. In the environment that preceded today's multilateralism, a debtor nation that could not service its debt would likely be excluded from the financial markets, meaning that it would be unable to borrow. The state would be limited to immediate exchanges to the exclusion of large and long-term projects. The state's infrastructure would suffer and its economy's growth would be very slow. This is clearly a suboptimal outcome, since new credit could produce growth. Growth, in turn, would enable partial but quick repayment of the previous loans. However, the adoption of growth policies would be politically inconvenient and disruptive for the debtor. Thus, the first problem is the debtor's inability to commit. Namely, the problem is the overcoming of social and political resistance to growth policies inside the debtor country.

The Greek model of a two-step restructuring with bond accumulation and value injection by the ECB solves the problem of the inability of the sovereign to commit to adopt disciplined growth policies. Greece's collective action law and clauses solved the second problem of the minority creditors' incentive to refuse the restructuring (to "hold out") and insist on full repayment. The next paragraphs explain these two problems from the perspective of game theory.

#### *A. The Sovereign's Inability to Commit to Growth*

The first level of analysis reveals the problem to be akin to the prisoner's dilemma of game theory. The players are the sovereign debtor and the world financial community or the creditors, acting as one. Table 1 shows game theory's payoff matrix of the game.<sup>27</sup> The debtor's moves are (i) to maintain the status quo,

26. See, e.g., CARMEN M. REINHART & KENNETH ROGOFF, *THIS TIME IS DIFFERENT! EIGHT CENTURIES OF FINANCIAL FOLLY* (2009).

27. A very extensive and fascinating analysis of the restructuring of sovereign debt using game theory is in VINOD K. AGGARWAL, *DEBT GAMES: STRATEGIC INTERACTION IN INTERNATIONAL DEBT RESCHEDULING* (1996). The analysis of the text has significant similarities with the two extremes that Aggarwal considers, the creditor choices of "low concessions" or "high concessions" correspond, respectively, to "no restructuring, no new loans" and "restructure & new loans." The debtor choices of

likely bureaucracy, patronage, and corruption (left column) or (ii) to induce growth (right column) through politically inconvenient policies and discipline. The financial community's moves are (i) to refuse restructuring and force economic isolation (top row) or (ii) to restructure and provide new credit (bottom row). The cells that correspond to the intersection of each strategy hold the results, for the debtor in the upper right and for the creditors in the lower left. As a result of the creditors' inability to compel growth policies on the debtor, the suboptimal result obtains: creditors refuse restructuring and produce economic isolation.

Contemporary multilateralism, the Troika, solve the problem in the two-step transaction with bond accumulation and value injection.<sup>28</sup> First, the Troika imposes growth measures on the debtor as a condition of short-term financing. Second, it demands a restructuring from creditors as a condition of long-term refinancing, while injecting new value for the benefit of the creditors to induce them to accept the restructuring. Before the second step, the Troika accumulates Greek short term bonds that are nearly worthless and exchanges them for long term obligations that are not subject to the haircut but, if the debtor continues to comply with the reform and oversight demands, then the Troika will eventually partially forgive.<sup>29</sup> Thus, the ECB maintains some pressure on Greece to continue to comply with reforms after the restructuring.

		Sovereign Debtor	
		Status quo	Growth Policies
Creditors	No restructuring, no new loans	Little growth  Slow Repayment	Inconvenient growth  Medium Repayment
	Restructure & new loans	Little growth  Partial & slow Repayment	Inconvenient growth  Partial but fast Repayment

**Table 1:** The payoff matrix of the interaction between the insolvent sovereign debtor and creditors, acting as one.

This analysis shows that sovereign insolvency may lead to a suboptimal outcome even if the creditors were acting as a single entity. Even if creditors faced no other collective action problem, they would be unable to make the insolvent sovereign debtor commit to adopting policies that favor growth in exchange for new loans and partial forgiveness of past loans. The resolution of this problem by contemporary multilateralism is an important feat. Compare this process, however,

"low adjustment" or "high adjustment" correspond, respectively, to "status quo" and "growth policies." See, e.g., *id.* at 59.

28. Cf., Ed Bartholomew et al., *Two-Step Sovereign Debt Restructuring: A Market-Based Approach in a World Without International Bankruptcy Law*, 35 GEO. J. INT'L L. 859 (2004).

29. See *supra* text accompanying note 14.

to the reorganization of an insolvent corporation. Pre-insolvency creditors do not receive a payout from the post-insolvency creditors in order to consent to the bankruptcy; no creditor needs to accumulate worthless obligations of the debtor to induce the debtor's continued compliance and the reorganization happens in a single step. The two-step resolution of the problem that includes the accumulation of worthless bonds and the injection of value for the benefit of creditors is very costly. Later, Part V discusses potential improvements in the regime of sovereign insolvency.

### *B. The Minority Creditor's Incentive to Hold Out*

Creditors face one more problem. Even if the majority of the creditors agree to a restructuring, the last creditor has an incentive to insist on full repayment. The fear that the last creditor may hold out for full repayment infects the collective. Since each creditor would rather be paid in full, each has an incentive to withhold support for the restructuring and to refuse to agree until after the others have committed.

This second collective action problem also arises in many insolvencies under national law. When debtors seek to renegotiate their debts (in a "workout"), each creditor would benefit from holding out if the other creditors' acceptance of the workout returns the debtor to solvency. Domestic law, however, gives the debtor the threat of a bankruptcy filing which will force all creditors into a collective proceeding that will impose equal treatment.

A collective proceeding analogous to bankruptcy does not exist in the setting of sovereign insolvency. To the extent that the sovereign's obligations are governed by the sovereign's own laws, the sovereign can change those laws to the sovereign's advantage (provided that does not become expropriation or a breach of the bilateral investment treaties).<sup>30</sup> To the extent, however, the sovereign's obligations are subject to the laws of a different jurisdiction; bankruptcy is not available because the sovereign is not subject to other courts' jurisdiction. As a result, creditors have been able to compel collection against private assets of a state when there are non-governmental assets that are exposed to a foreign court's jurisdiction.<sup>31</sup>

The game theory expression of the holdout problem considers the single creditor's choice against that of all the other creditors. Table 2 illustrates game theory's payoff matrix of the holdout creditor's problem. The columns capture the choices of the holdout creditor. The holdout creditor may (i) refuse to restructure (left column) or (ii) agree to the restructuring (right). The majority has the same choice and can (i) refuse to restructure (top row) or (ii) agree to the restructuring (bottom row). If the majority refuses the restructuring, the outcome is low growth for the debtor and very slow repayment for both. If the holdout creditor agrees to restructure while the majority refuses, then the holdout creditor receives even less.

---

30. See, e.g., Ioannis Glinavos, *Investors vs. Greece: The Greek 'Haircut' and Investor Arbitration Under BIT's* (Working Paper No. 15.5.12, 2012), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2021137](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2021137).

31. See, e.g., G. Mitu Gulati & Kenneth N. Klee, *Sovereign Piracy*, 56 BUS. LAW. 635 (2001).

If the majority, however, agrees to a restructuring, then the debtor can experience growth and the holdout creditor has no incentive to consent to a restructuring. If the holdout creditor manages to force repayment in full, then the majority will suffer a slightly reduced partial payment (or merely a slightly riskier growth of the debtor). After the majority has agreed to restructure, the holdout creditor's agreement to restructure merely ensures the holdout creditor's equal partial payment (haircut). As long as the holdout creditor can choose after the majority, refusing to restructure offers a better outcome.

		Holdout Creditor	
		Refuse restructuring	Restructure
Majority of Creditors	Refuse restructuring	<b>Very slow repayment</b>	<b>Very slow &amp; reduced repayment</b>
	Restructure	<b>Full repayment</b> <b>Reduced partial repayment</b>	<b>Equal partial repayment</b> <b>Equal partial repayment</b>

Table 2: The payoff matrix of the holdout problem.

The holdout problem means that creditors who cannot be forced into a collective process akin to bankruptcy have an incentive to become holdout creditors. Since no bankruptcy or other collective process exists for sovereign debtors, their creditors have the incentive to holdout.

Where the holdout problem is acute, a contractual solution has emerged, although partial and imperfect. Sovereign bonds issued under UK law tend to include "collective action clauses," meaning clauses that bind a minority to a restructuring, exchange, or settlement that the majority accepts. Once a bond contains such a provision, the holdout problem almost disappears because the minority creditor, even objecting, will receive the same partial payment that the majority receives.

For a small fraction of its debt, Greece had borrowed using such clauses. The corresponding loans were bonds governed by English law that contained collective action clauses. The collective action clauses state that if a majority of the bondholders accept a settlement, exchange, or amendment of the terms of the contract (known as the bond "indenture"), then the exchange or amendment occurs for the entire bond, binding the minority.<sup>32</sup> The majority required for restructuring varied from two thirds to three quarters in monetary amount.

Most of Greece's debt, however, was governed by domestic Greek law and did not contain collective action clauses. If Greece unilaterally refused to honor its

---

32. For the operation of sovereign bond clauses see, generally, the sources cited *infra* notes 35, 37 and 40.

obligations, it may have been held to be an expropriation or a violation of bilateral investment treaties, obligating Greece to reimburse the creditors.<sup>33</sup> Instead, Greece passed a law subjecting its obligations to mandatory restructuring if the restructuring was accepted by two thirds of its creditors.<sup>34</sup> Thus, Greece exercised its sovereignty to create a legislative solution to the holdout problem.

#### IV. SOVEREIGN INSOLVENCY LAW DESIDERATA

Greece's debt was restructured because of the two-step refinancing with bond accumulation and new value injection and because of the collective action legislation and clauses. Some differences between Greece's setting and a corporate reorganization are worth underlining because they identify issues that a sovereign insolvency regime should resolve, as explained below. While the conditional nature of the restructuring suggested here is unconventional, the IMF and others have proposed such regimes.<sup>35</sup>

First, the lack of priority for Greece's post-insolvency creditors meant that the post-insolvency creditors had to create a two-step restructuring with an injection of new value to induce private creditors to favor the restructuring. A better regime of sovereign insolvency would avoid this by offering post-insolvency creditors priority.

Second, creditors holding Greek bonds that were subject to foreign law voted by bond rather than class. This helped creditors take holdout positions. A better regime of sovereign insolvency would enable voting by classes that would bind holdout attempts.

Finally, the absence of a mechanism to induce Greece's continued pursuit of growth policies meant that the Troika had to obtain the credible threat of reinstating some Greek debt by accumulating worthless Greek bonds. A better regime of sovereign insolvency would induce compliance by conditioning the restructuring on continued compliance by the debtor with reform and supervision demands.

##### A. Post-Insolvency Creditor Priority

When the insolvent sovereign faces inability to borrow and turns to the IMF or the ECB, the current regime offers no formal arrangement granting the post-insolvency creditors, the IMF and the ECB, seniority over past creditors. In Greece's example, the post-insolvency creditors, the Troika, obtained priority by structuring the two-step financing plan and conditioning the second step on creditor

---

33. See Glinavos, *supra* note 30.

34. See, e.g., Landon Thomas, Jr., *Given Greek Deal, Investors May Reconsider Sovereign Debt*, N.Y. TIMES (Feb. 24, 2012), [http://www.nytimes.com/2012/02/25/business/global/as-greek-restructuring-looms-bondholders-think-twice-about-other-sovereign-debt.html?\\_r=1&pagewanted=all](http://www.nytimes.com/2012/02/25/business/global/as-greek-restructuring-looms-bondholders-think-twice-about-other-sovereign-debt.html?_r=1&pagewanted=all).

35. Discussed in detail in William W. Bratton & G. Mitu Gulati, *Sovereign Debt Reform and the Best Interest of Creditors*, 57 VAND. L. REV. 1, 26-79 (2004); see also Steven L. Schwarcz, *Sovereign Debt Restructuring: A Bankruptcy Reorganization Approach*, 85 CORNELL L. REV. 956 (2000); Anne O. Krueger, First Deputy Managing Dir., Speech at the Institute for International Economics Conference on Sovereign Debt Workouts: Hopes and Hazards: New Approaches to Sovereign Debt Restructuring: An Update on Our Thinking, (Apr. 1, 2002) (transcript available at <http://www.imf.org/external/np/speeches/2002/040102.htm>).



acceptance of a steep haircut. If creditors objected to the second restructuring, then the first step would have been in vain. If the restructuring failed, Greece would face slow growth and all the creditors, including the Troika as a first-step creditor, would receive payments that would be severely delayed and have very small value. To induce acceptance of the restructuring by the creditors, the Troika injected additional funds for their benefit in the second step.<sup>36</sup> Reorganization law prevents exposing the post-insolvency creditor to this predicament by giving them "administrative expense" priority over pre-bankruptcy creditors.

Compare the Greek restructuring to the filing of a bankruptcy petition. The filing of the bankruptcy petition divides two time periods. Prior creditors become part of the collective proceeding. Prior creditors are, thus, exposed to the risk of partial repayment and receive a vote in the proposed reorganization. Subsequent creditors have priority because they finance the debtor's attempt to emerge from insolvency and receive the priority of administrative expenses. The post-insolvency lender does not need to give any value to pre-insolvency lenders because the post-insolvency lender has priority.

Thus, a better sovereign restructuring regime would grant priority to post-insolvency creditors over pre-insolvency creditors. If such a regime existed in Greece's case, then the first-step loans from the IMF and the ECB would receive priority and, thereafter, only the prior debt would be restructured. The two-step model of the Greek restructuring would not be necessary. The cost of insolvency would be reduced because the IMF would not have any reason to induce the creditors to accept a restructuring by injecting additional funds. The formal priority of post-insolvency loans would also prevent the differential treatment of IMF loans from triggering loan clauses that prohibit preferential treatment of other creditors.<sup>37</sup> Finally, such a regime could eventually allow private lenders to replace the IMF in undertaking post-insolvency financing and the associated supervision of the sovereign's pro-growth policies.

### *B. Voting by Class*

In the current regime, the amendment or exchange of bonds subject to foreign law is subject to the loan contract (known as the "indenture"). When the indenture contains a collective action clause, the exchange or amendment of the loan happens if the required majority votes in favor. In other words, bondholders vote by loan: the holders of each loan and each bond vote to accept the proposed restructuring separately from holders of other bonds. This strengthens holdout creditors. In a

---

36. Chambers & Spink, *supra* note 10; Thomas, *supra* note 34.

37. See, e.g., G. Mitu Gulati & Kenneth N. Klee, *supra* note 31, at 635-51. Gulati and Klee discuss the exercise of a "pari passu" clause by Elliott against Peru. Elliott is again in the news pursuing claims from Argentina's restructuring which produced a greater haircut than that of Greece. See also., Felix Salmon, *Argentina v. Elliott: It's Not About Pari Passu Anymore*, REUTERS BLOG (April 23, 2012), <http://blogs.reuters.com/felix-salmon/2012/04/23/argentina-vs-elliott-its-not-about-pari-passu-any-more/>.

reorganization, by contrast, creditors can be grouped into classes of non-dissimilar creditors.<sup>38</sup> This prevents holdouts.

The typical example of this holdout concern would have a creditor buy a large position in a bond at a deep discount, with an eye to obtaining the voting power to prevent consent to a restructuring. Consider that this bond's collective action clause requires two-thirds majority. A creditor's position would need to be greater than one third of that bond to have the power to block that bond's participation in the restructuring. Then, when the bondholders vote on the restructuring, this creditor's opposing vote would prevent that bond's restructuring. Its bondholders would become holdout creditors.

In reorganization, an equivalent creditor's objection to the reorganization could be overcome if the creditor voted in a class containing other similarly situated creditors. Consider, for example, that the loan containing the collective action clause is one third of a debtor's unsecured obligations. A creditor acquires half of that loan's outstanding bonds. By voting against restructuring, this creditor can prevent the restructuring of that loan in a workout. The other participants in the workout can circumvent this holdout creditor's objection through a bankruptcy filing. After the bankruptcy filing, the reorganization plan could define the entire group of unsecured creditors as a class. The holdout creditor is only one sixth of this class. If reorganization law requires a majority of two-thirds,<sup>39</sup> then the objecting creditor cannot, acting alone, defeat the reorganization plan.

A sovereign restructuring regime should allow voting by classes to reduce the possibility of holdouts, as has been noted.<sup>40</sup> Then, even creditors who could block the restructuring of a specific bond would be bound by the majority decision about the restructuring.

### *C. Conditionality of Restructuring*

A crucial difference between sovereign insolvency and corporate reorganization lies in policy continuity. In a corporate reorganization, the debtor's management will be accountable to the new set of shareholders that will result from the recapitalization of the debtor pursuant to the reorganization plan. In contrast, the sovereign's government will still be elected by the same population, be subject to the same constitution, and responsible to the same social and political discourse

---

38. Similar creditors can be separated but dissimilar creditors may not be aggregated. See 11 U.S.C. § 1122(a) ("[A] plan may place a claim ... in a particular class only if such claim ... is substantially similar to the other claims ... of such class.").

39. United States law requires a two-thirds majority by amount and an absolute majority by count, 11 U.S.C. § 1126(c) ("A class ... has accepted a plan if such plan has been accepted by creditors ... that hold at least two-thirds in amount and more than one-half in number...").

40. For an excellent classification discussion, see generally Patrick Bolton and David A. Skeel, Jr., *Inside the Black Box: How Should a Sovereign Bankruptcy Framework Be Structured?*, 53 EMORY L.J. 763 (2004). Note also that the EU has moved toward collective action clauses with group voting rather than voting by bond and those shall be mandatory in all EU borrowing from 2013. See EFC Subcommittee on EU Sovereign Debt Markets, *Model Collective Action Clause Supplemental Explanatory Note* (Mar. 26, 2012), [http://europa.eu/efc/sub\\_committee/pdf/supplemental\\_explanatory\\_note\\_on\\_the\\_model\\_cac\\_-\\_26\\_march\\_2012.pdf](http://europa.eu/efc/sub_committee/pdf/supplemental_explanatory_note_on_the_model_cac_-_26_march_2012.pdf).

through the same media. From this perspective, the frequency of repeated defaults is unsurprising.<sup>41</sup>

Whereas the academic discussion of sovereign debt restructuring is largely silent on the need for changes of policy by the debtor, the Greek example focuses on it. The accumulation of worthless Greek bonds by the ECB gives the ECB the credible threat of reinstating some Greek debt if Greece does not pursue growth.<sup>42</sup> A better proposal would condition the restructuring on an ex post procedure, for example, ten years after the insolvency. By making the entire restructuring subject to annulment or a confirmation or ratification, the debtor would face the risk that the entire forgiven amount of the restructured debt would reappear. In Greece's example, such an objection would reinstate a much greater indebtedness than the ECB's insistence on the full repayment of the bonds it has accumulated. Therefore, this proposal would be a stronger incentive on the sovereign to reform. Furthermore, the proposal would reduce the cost of restructurings by eliminating the need for the ECB to accumulate worthless bonds.

Granted, disputes would arise from the proposed annulment or ratification of the restructuring ten years later, such as the propriety of creditors' objections or the good faith of the sovereign debtor's effort to comply. However, such disputes routinely arise in the context of long term contracts between sovereigns and private entities. They receive satisfactory resolution through arbitration. A conflict between the sovereign and its creditors about the vote on the confirmation of the restructuring is suitable for adjudication or arbitration.

This proposal is subject to improvements. One concern about the proposal may be that the reinstatement of all debt is so draconian a threat as to lose credibility. The possibility of a fractional reinstatement may answer that concern. Also, the proposed reinstatement after ten years may be too remote, allowing a government subject to intervening elections to treat it as a problem for the next administration. A potential biennial reinstatement of one sixth of the debt over twelve years may answer that concern. Finally, a vote of the pre-insolvency creditors alone would be biased by incentives to collect. A more complex and multilateral scheme would be superior.

#### CONCLUSION: A COST ESTIMATE

The Greek case study allows a back-of-the-envelope calculation of the cost of the absence of a bankruptcy regime with these features. The two components of the cost are: (1) the cost of injecting value to induce the vote for the restructuring; and

---

41. See REINHART, *supra* note 26. See also Carmen M. Reinhart and Kenneth Rogoff, *This Time is Different: A Panoramic View of Eight Centuries of Financial Crises*, at 30, table 7, (Apr. 16, 2008), available at [http://www.economics.harvard.edu/files/faculty/51\\_This\\_Time\\_Is\\_Different.pdf](http://www.economics.harvard.edu/files/faculty/51_This_Time_Is_Different.pdf). (stating that Greece had defaulted four times by 2008 since its independence in 1829 (Having now defaulted five times puts it behind the six times (now seven?) that Portugal has defaulted since 1800 among European countries).

42. See, e.g., Mitu Gulati and Jeromin Zettelmeyer, *Engineering an Orderly Greek Debt Restructuring*, at 4 (Jan. 29, 2012), available at <http://ssrn.com/abstract=1994511> or <http://dx.doi.org/10.2139/ssrn.1994511> ("Another complicating factor is that a large volume of bonds – perhaps up to 20 percent of outstanding Greek government bonds – are in the hands of the European Central Bank (ECB).").

(2) the cost of accumulating depressed Greek bonds in order to maintain debtor discipline after the restructuring. The former would not be necessary if post-insolvency creditors had priority, the latter if a mechanism inducing debtor compliance existed.

First, the cost of the injected value can be calculated from the fact that the restructuring applied to bonds with a face value of about €197 billion. Those received value of 25 cents on the euro (“¢/€”). Since the Troika injected about 15¢/€ and Greece 10¢/€ to reach this 25¢/€, the Troika’s contribution is 15% of the total face value of €197 billion, or a bit less than €30 billion. Therefore, the absence of a rule giving priority to post-insolvency lenders cost about €30 billion.

Second, the estimation of the cost of accumulating Greek bonds before the restructuring requires a guess about the price of Greek bonds absent the Troika’s accumulation program. A high estimate of the loss can be based on the notion that Greece managed to restructure by paying 10¢/€. If no other buyers existed for Greek bonds, traders (and the central banks themselves) who guessed that Greece would pay 10¢/€ could profit from buying them at prices below that. Thus, one guess is that Greek debt would trade at about 10¢/€ without the Troika’s accumulation program. The Troika paid about €39 billion for bonds with a face value of about €50 billion.<sup>43</sup> If the market value of those bonds were €5 billion, namely 10¢/€ of face value, then the lack of a legal mechanism to impose on Greece discipline after the restructuring cost the Troika about €34 billion, as a high estimate. A low estimate comes from assigning a higher value to Greek debt. Proceed with the assumption that, if the Troika were not buying, then Greek debt would have 75% the value that the Troika paid. Then, of the €39 billion that the Troika paid for the bonds, it wasted 25%, or €9.75 billion. Therefore, the low estimate of not having a legal mechanism to impose post-insolvency discipline on Greece is that it cost €9.75 billion.

Aggregate the cost of the lack of priority for post-insolvency creditors, €30 billion, with the estimate of the cost of the lack of compliance inducement, €9.75 to €34 billion. The lack of a sovereign bankruptcy regime cost governments and multilateral institutions about €39 to €64 billion, or, in US dollars at the exchange rate at the time of \$1.32 per euro, \$51 to \$85 billion. These funds went to bondholders, mostly financial institutions. Recall that the IMF proposed a sovereign bankruptcy regime in 2002.<sup>44</sup> The opposition of financial institutions defeated it.<sup>45</sup>

An alternative path to obtaining sovereign insolvency law exists. While the multilateral attempt of the IMF attempt failed, sovereign insolvency law is possible through a treaty between only the nations that have the largest financial institutions.<sup>46</sup> Subsequently, any nation seeking IMF assistance would have to adopt the treaty before receiving the assistance. Financial institutions of the initial signatories that would object to the application of sovereign insolvency law (as

43. Heller, *supra* note 133.

44. Krueger, *supra* note 355.

45. See Brad Setser, *The Political Economy of the SDRM*, 2008, Council on Foreign Relations, available at [http://www.cfr.org/content/publications/attachments/Setser\\_IPD\\_Debt\\_SDRM.pdf](http://www.cfr.org/content/publications/attachments/Setser_IPD_Debt_SDRM.pdf).

46. For international treaties and their adoption see generally LOUIS HENKIN, *HOW NATIONS BEHAVE: LAW AND FOREIGN POLICY* (1979); for the EU context see Joseph Weiler, *The Transformation of Europe*, 100 YALE L.J. 2403 (1991).

they would when outvoted in voting by classes, and when post-petition creditors would get priority) would be bound by their nation's early adoption of the treaty. Financial institutions of the reorganizing nation would be bound by that legal system's adoption of the treaty.

